January 25, 1943

Dear Doctor:

This letter is sent to you by the Surgeon Generals of the Army and Navy and the U. S. Public Health Service, with the cooperation of the American Medical Association and under the auspices of the Committee on Information of the Division of Medical Sciences of the National Research Council.

Such letters will be issued each two weeks unless extraordinary circumstances arise to prevent. Their purpose is to keep the physician in the armed forces abreast of current developments in medical science and in medical military information.

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Commander C. C. Yanquell, M.C., U.S.N., writes in the United States Naval Medical Bulletin, Jan. 1943, page 43, on "Hygiene for Aviation Personnel in Aircraft Carriers." He emphasizes particularly the fact that the hygiene of the naval aviator must consider that he is apt to be ship-based for long intervals. Satisfaction in food, rooms, recreation and medical care looms large in his life and does much to offset the damage of hard, exacting work pushed to the limit of endurance. The majority of aviators appearing at sick call will be the immediate concern of the flight surgeon because of eye, ear, nose and throat conditions. In the tropics a certain number develop conjunctival irritation or headaches from sun glare. Of great importance is study of the diet to make sure that it is adequate. With altitude flying the elimination, as far as practicable, of foods liable to cause excessive intestinal gas and of the more common of the potentially allergic food materials is important. Protection of the ears with vaseline-impregnated cotton and other methods is desirable. Recommendation by the medical officer for removing a pilot temporarily from flight status should be promptly and clearly made to the squadron commander. Protracted cruises in hot climates tend to make significant changes in circulatory efficiency ratings, out of proportion to the amount of flying done.

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Lt. Calvert Stein, M.C., U.S.N.R., writes in the United States Naval Medical Bulletin, Jan. 1943, page 142, on "Neuropsychiatry in the United States Navy." There have been developed a confidential questionnaire and a neuropsychiatric report to serve as a guide. The author claims that it has been found both possible and expedient to glean an adequate diagnostic picture of the mental and emotional assets and liabilities of a candidate in an average of five minutes, where formerly it was the custom to spend several hours. Doubtful cases usually require twice as much time. For highest efficiency, he says an examiner should not be required to perform more than forty of these examinations each day, and twenty in half a day is better.

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J. R. Veal discusses (J.A.M.A., Jan. 23, 1943) the prevention of pulmonary complications following thigh amputations by high ligation of the femoral vein. The chief source of emboli is from the femoral vein in the amputated stump. High ligation of the femoral vein before amputation closes this source of emboli. In 275 major amputations without high ligation of the femoral vein 14.9 per cent of the patients died from pulmonary complications. In 80 thigh amputations with high ligation of the femoral vein there was only one pulmonary complication. In the discussion of this paper G. de Takats, Chicago, recommended postoperative Trendelenburg position maintained from 24 to 48 hours. In his experience pulmonary embolism does not occur frequently after amputations, the incidence being not more than 1 or 2 per cent. Coagulation of blood is favored in the postoperative state. Heparin or other anticoagulants cannot be given to all postoperative patients, but the endangered group may be picked out by their response to heparin. E. V. Allen, Rochester, Minn., said that a slowed venous circulation is responsible for postoperative venous thrombosis. Postoperative venous thrombosis occurs infrequently. A study of a large series of patients for whom nothing was done might show no postoperative venous thrombosis merely because it does occur infrequently.

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A report to Paul V. McNutt, Chairman of the War Manpower Commission by Dr. Frank H. Lahey, Chairman, Directing Board of the Procurement and Assignment Service for Physicians, said on January 10, 1943, that more than 400 physicians have already been relocated to aid in the care of civilians during the emergency. It is believed, Dr. Lahey said, that the medical needs of the armed forces in 1943 can be met by an additional 10,000 physicians, leaving more than 80,000 active civilian physicians to care for the civilian population. At present the following states show shortages of physicians: Alabama, Arizona, Arkansas, Colorado, Georgia, Idaho, Kentucky, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, South Dakota, Tennessee and West Virginia.

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Dr. Henry Klein, Bethesda, Md., U.S.P.H.S. officer, studied dental difficulties among 38,000 white adults (reported in the Journal of the American Dental Association, Jan. 1943). The average 18-year-old in America has 29.8 serviceable teeth, which have an average expectancy of remaining serviceable for 31.5 years longer, per tooth. (There are 32 teeth in the permanent set.) Tooth mortality is closely related to income. The average American loses one tooth for each two and one-half years of adult life. By the time he is 66 years old, the well-to-do white adult has lost, on the average, 21 permanent teeth, whereas the person on a lower economic level loses nearly 24 teeth.

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According to statistics developed by the Metropolitan Life Insurance Company, American soldiers, sailors and marines all over the world probably have a better health record than any other body of troops. The statisticians conclude from their study that it would be foolish to minimize the health problems that our troops are facing. They say, "However seriously the American public is inconvenienced by the withdrawal of physicians from civilian life, it is a small price to pay for protecting our men in the service."

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Training courses have been established in the Lahey Clinic for anesthetists, roentgenologists, laboratory and x-ray technicians for the Navy, and in internal medicine and physical therapy for the Army. In addition, there is a cooperative course with the Massachusetts General Hospital for training thoracic surgeons.

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Russian physicians Kekcheyev, Derzhavin and Pilipchuk report to War Medicine (A.M.A. periodical forthcoming) on a technic for expediting the period of adaptation of the eye when passing from light to darkness. Based on researches in the Institute of Experimental Medicine, they find that excitation of any one sense organ by a customary and adequate stimulus immediately causes a change in the sensitivity of other sense organs, either a heightening or diminishing of it. Weak excitations of the organs of sense of hearing, taste or smell enhance the sensitivity of other sense organs, including those of sight, they say, whereas strong excitations have the opposite effect. They claim that it is "possible by selecting suitable stimuli for other sense organs sometimes to increase the sensitivity of an eye already adapted to darkness to maximum by another 40 to 50 per cent." Furthermore, sensitivity of human sense organs is directly dependent on the state of fulness of the stomach, the intestine and the bladder. It is important in responsible reconnaissance operations that the visceral organs of the abdomen and pelvis should not be overcongested.

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Major Edgar T. Campbell, M.C., U.S.A., in a forthcoming article in War Medicine, says that primary atypical pneumonia is frequently associated with malaria in regions where the latter disease is endemic. Both diseases run an independent course concurrently. The diagnosis of primary atypical pneumonia in such cases must be made by roentgen examination.

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W. F. Mengert, Iowa City, writes in the American Journal of Obstetrics and Gynecology, Nov. 1942, p. 888, on morphine sulfate as an obstetric analgesic. Morphine alone and in combination was associated with the highest percentage of respiratory and circu-

latory difficulties at birth and of fetal death. Low forceps operations were three times higher among these patients than among those receiving other analgesics and nine times greater than in the control group.

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H. D. Green, Cleveland, discusses shock in Anesthesiology, Nov. 1942, p. 611. Shock is initiated by any factor that causes an acute but persistent diminution of the minute volume of the circulation. This reduction may be of cardiac origin, due to loss of plasma externally, due to a primary combined diminution of blood volume from increased capillary permeability and/or an increase of the capacity of the circulation caused by dilatation of capillaries and venules. By direct effects on the capillaries such substances as anesthetics, heparin, dyes, toxins and other chemical agents in excessive quantities may also contribute to or even induce shock. It is most important to prevent the initiating factors and to restore the blood volume before the vicious cycle is firmly established and before irreversible damage occurs in the various tissues of the body. Green is convinced that it is better to give fluid, preferably blood, during an operation, even though it is continuously lost by unavoidable hemorrhage, than to allow the blood pressure to become dangerously low and then to attempt to restore the fluid loss after the operation is completed.

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Dr. Walter E. Dandy, Baltimore, discusses in the Journal of the Mount Sinai Hospital, New York, Nov.-Dec. 1942, page 384, recent advances in the diagnosis and treatment of ruptured intervertebral disks. Since the elimination of contrast mediums in April 1941, Dandy has made a correct diagnosis in 65 cases by clinical examination alone. He believes that iodized oil and air injections into the spinal canal do far more harm than good; their avoidance is most enthusiastically welcomed by the patient. In view of the fact that 96 per cent of all ruptured vertebral disks are at the fourth, fifth and sixth lumbar spaces and since unilateral exposure (hemilaminectomy) is adequate to disclose the disk, regardless of the interspace that is involved, it is only necessary to make the diagnosis of a ruptured lumbar vertebral disk. The diagnosis is almost pathognomonic from signs and symptoms alone.

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Dr. D. J. Morton, New York, considers disorders of the feet in the New York State Journal of Medicine, Nov. 15, 1942, page 2119. Morton states that the most direct cause of metatarsalgic trouble is shortness of the first metatarsal, the second source is a rearward position of the sesamoid bones and the third and most common cause is a looseness or laxity of the basal joints of the first metatarsal segment. The whole range of symptoms are not unlike those present in any other chronically strained joint persistently subjected to continued strains of similar violence

or intensity. Therefore cases of chronic joint strain are due to improper weight distribution, and the symptoms are maintained and exaggerated through daily persistent abusive function. Consequently the immediate phases of treatment are (1) restriction of activities and weight bearing in accordance with the severity of symptoms, (2) rest, (3) frequent brief periods of rest during the day with the legs and feet supported at hip level, (4) removal of all sources of surface irritation (corns, calluses, warts) and avoidance of badly fitting shoes, (5) contrast plunges daily (late afternoon preferably) to counteract the irritative effects of each day's activities and to establish improved circulatory conditions and (6) other therapeutic measures (physical therapy or drugs) as indicated. The signs of faulty shoes and those due to internal foot disorder must be distinguished. A helpful working rule is to assume (in general) that pain on the top and sides of the foot calls for a check on the shoe; when it is on the bottom or the sole of the foot the trouble is generally inside the foot. At least a dorsoplantar roentgenogram should be taken of both feet in every case. Soft tissues and nerves that have been more or less irritated for months or years do not become normal in a few hours or days. Permanent results require intelligent and patient treatment.

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Geoffrey Bourne, in the British Journal of Physiology (Nov. 30, 1942, page 327), discusses the relation of vitamin C intake to regeneration of bone. He claims that pure synthetic vitamin C alone is able to promote regeneration of bone in scorbutic guinea-pigs. The dosage required was 2 milligrams of vitamin C a day. The corresponding dose to produce the same results in human beings would be between 20 and 40 milligrams daily. He suggests that a person with a fractured bone be given 40 milligrams of vitamin C a day as long as there is the slightest doubt about the efficacy of small doses.

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J.S.K. Boyd and J.D. Maclennan discuss in the London Lancet (Dec. 26, 1942, page 745) the control of tetanus in the Middle East. They say the chances of becoming infected with tetanus in the Middle East, and particularly in the Western Desert, are much less than in France and Flanders. In the first two years of war in the Middle East 18 cases of tetanus were reported in the British Army. The distribution of cases among inoculated and uninoculated troops affords evidence of the value of active immunization. Nevertheless, 5 cases, 3 of them fatal, developed in inoculated men. In one fatal case, there was little or no response to immunization with two doses of toxoid. This emphasizes the necessity for giving three doses of toxoid, and for heightening the barrier by giving a dose of antitoxin after the man is wounded. In the other two fatal inoculated cases, failure was attributed to overwhelming infection resulting from masses of necrotic tissue in the wound. American experience against extra dose of toxoids following wound [illegible]

The Lancet, commenting on this report, points out that the American and Canadian forces follow Ramon and give an additional dose of toxoid at the time of wounding, and as all American troops are given a boosting dose before entering the theater of war, the antibody content should ordinarily be sufficient to deal with a tetanus infection without passive protection.

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Drs. Joseph E. Hamilton and Ellis Duncan of the University of Louisville School of Medicine report in Surgery (Jan. 1943, page 107) ~~report~~ 336 cases of penetrating gunshot and stab wounds of the abdomen occurring in civilian life. They emphasize the value of peritoneoscopy in diagnosing doubtful cases of perforation. Hemorrhage is synonymous with shock in perforating abdominal trauma, and therefore operation to control hemorrhage brooks no delay. Autotransfusion is recommended, regardless of blood contamination, for all seriously injured patients operated on within six hours. This involves returning to the seriously injured patient all free peritoneal blood that is not over six hours old.

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A series of papers on immersion blast injuries, published in the Current Naval Medical Bulletin (Jan. 1943) recommend that conservative treatment be followed, with shock being counteracted by sulfa drugs, oxygen being administered, and an adequate intake of fluids maintained. Life jackets are effective in reducing the danger of blast injury. Men should be instructed to swim on their backs if the abdomen is not adequately protected.

Men who had their backs toward the blast or who were swimming on their backs suffered lung rather than abdominal injury. Among the important factors in immersion blast injury are the position of the individual in the water, the distance from the detonation, whether the mouth was opened or closed, protection offered by the life jacket, and the actual position of the jacket to the wearer.

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In an address at the Medical Field Service School in Carlisle Barracks, Pa., on January 8, Brig. Gen. David N.W. Grant stressed the conditions surrounding medical care in North Africa, and demonstrated the long air trips in evacuation of the wounded necessary in the African theater.

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An item from the French press in Curieux Marcellin, Nov. 6, 1942, states that the German authorities have requisitioned three large hospitals in Paris comprising 3,280 beds, leaving 36,800 beds for the civilian population, estimated at 4,200,000. The statement is made that scabies has increased from 1 to 70 per cent; tuberculosis has doubled among children 6 to 8 and adolescents 18 to 25. British patients remaining in Paris are looked after at the Valde-Grace and Jewish patients at the Rothschild foundation

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The Army's School of Military Neuropsychiatry opened on January 4, 1943, at the Lawson General Hospital, Atlanta, Ga. Medical officers who have had a minimum of 12 months full-time training or practical experience in neurology or psychiatry are considered eligible to attend. Commandant of the school is Col. William C. Porter, former chief of the neuropsychiatric division at the Walter Reed Hospital. His staff includes Major M. Ralph Caufman, Major Joseph Fetterman and Captain William H. Evarts.

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NEWS OF THE DAY: Dr. Hebbel E. Hoff, associate professor of physiology at Yale University School of Medicine, has been appointed professor of physiology at McGill University, Montreal. ..... Capt. William W. Moir Jr., formerly of Minneapolis, has been awarded the Distinguished Service Cross for extraordinary heroism in action in Northern Africa. The citation reads: "During the attack in the air and the ensuing strafing on the ground, Captain Moir distinguished himself by extraordinary heroism against the armed enemy by inspiring administration of medical attention to wounded personnel before attention to himself, despite severe wounds to his head and back." ..... A Five Year Program - A five year program of research and teaching in tropical medicine will be launched soon at the Columbia-Presbyterian Medical Center with the aid of a $150,000 grant from the Josiah Macy Jr. Foundation. ..... Dr. Howard A. Kelly, eminent gynecologist, died at the Union Memorial Hospital, Baltimore, on January 12, age 84, just a few hours before the death of Mrs. Kelly, who was in an adjoining room in the hospital.